Science of Color & Light

Mix different colors of light and see what you can create!

Kit contains:

- 2 pages of color mixer templates
- 4 pieces of colored cellophane
- brass fastener
- mini flashlight

You will need: tape, scissors, nail or sharp pencil for hole punching, and coloring supplies (optional).

MORTON GROVE PUBLIC LIBRARY
6140 Lincoln Avenue, Morton Grove, IL 60053
Youth Info Desk: 847-929-5102 | mgpl.org

INSTRUCTIONS

(1) Cut out the four color mixers, including the circle in the middle. If you'd like to decorate them, you can.

(2) Poke a hole in each one through the black dot on the bottom.

(3) For each color mixer, take a piece of colored cellophane and tape it over the middle hole. If you'd like, you can trim it so there is none hanging over the edge, but it's not necessary.

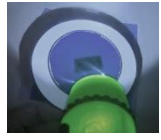
(4) Take the four color mixers, line up the holes on the bottom, and connect them together with the brass fastener.

Now it's time to experiment!!!

This works best in a room that's dark, but it can be done anywhere.

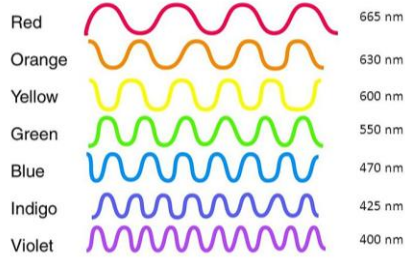
TRY THIS!

- Shine the flashlight through one color at a time onto a white surface. What color do you see? Try mixing two or three colors in different combinations.
- Try shining your light through the color mixer onto something with a color other than white. How does the color of the object change?

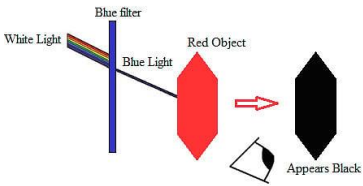


- Try looking at something that creates light (a phone, a computer screen, etc.) through the color mixer. How does it look?
- Write a message on white paper, using a different color for each letter. Look at the message through a blue filter. You may notice that the blue letters disappear or get harder to see, but you can still see red or green letters. Once you figure out which colors “disappear,” you can write a secret message with a filter as the decoder.

WHAT'S GOING ON?



Different colors of light travel at different wavelengths. When you use a colored filter, only the light waves of that wavelength get through to your eyes. For example, a yellow color filter will let through only yellow and absorb all other colors. When light goes through a blue filter onto a blue object, the object will still reflect blue and look blue. But when light from a blue filter hits a red object, the blue will be absorbed and no light will be reflected, making the object look black.



education.com/science-fair/article/colored-lights-effect/
exploritorium.edu/snacks/color-table